



# **INSTRUCT-O-GRAM**

## THE HANDS-ON TRAINING GUIDE FOR THE FIRE INSTRUCTOR

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### **SEARCH AND RESCUE**

#### **TIME REQUIRED**

Three Hours

#### **INSTRUCTIONAL AIDS**

Self Contained Breathing Apparatus

Personal Protective Clothing

Area To Conduct Small Area Search

#### **OBJECTIVES**

The student will:

1. Demonstrate a basic understanding of search and rescue operations, rescue considerations, search techniques, and victim removal.
2. Explain the sequence of events related to conducting a search and rescue operation.
3. Explain the considerations related to conducting a search in various occupancies.
4. Demonstrate the proper techniques for conducting a search of a small and large area and removal of victims by drags or carries (NFPA 1001 (1997) 3-3.8.).
5. Describe the techniques for rescuing an unconscious victim using ground ladders.

#### **SEARCH AND RESCUE - OVERVIEW**

Chronology of rescue operations

Rescue considerations

Search and rescue practical

Rescue using ground ladders

#### **I. CHRONOLOGY OF RESCUE OPERATIONS**

NOTE: Rescue of people in danger is the primary objective of a fire company.

##### **A. Before the Alarm Considerations**

1. Occupancies
2. People involved
3. Hazards
4. Objective to know in advance approximate type and extent of rescue operations

##### **B. At the Alarm Considerations**

1. First indication that problem exists
2. Initial information includes exact address or more general location
3. Company should know type of occupancy involved or type of area
4. Occupancy and time of day are important clues to possible presence of victims



## 5. Dispatch information is important

- a. "Across from"
- b. "Next door to"
- c. "At the rear of"
- d. "Near the intersection of"

## 6. First reports should be relayed to the company officer

## C. On the Fireground Considerations

## 1. Size up – begins before the apparatus is stopped

- a. Is fire building a closed-up dwelling with heavy smoke showing?
- b. Are cars parked in the driveway, front, or rear?
- c. Are people at windows of the apartment house, office building, or similar occupancy calling for help?
- d. In such multiple occupancy, with smoke showing, can calls for help be heard coming from inside?
- e. Is fire showing and, if so, where?
- f. Given interior construction of the building, in which directions will fire travel most rapidly?
- g. Extent of fire, size and age of building, and apparent occupancy is important.
- h. Information can be obtained from neighbors and tenants who have escaped.
- i. Special urgency, are people still inside?
- j. Reports of "everyone is out" may be erroneous.

## 2. Immediate rescue

- a. Must be attempted in extreme cases – jumpers or people with clothing on fire.
- b. All other operations must be delayed
- c. Get attention of victims and calm them.
- d. Presence of victims at windows may indicate other occupants.
- e. Call for help when rescue operations keep personnel from other duties.
- f. Take immediate action to control overly excited occupants.
- g. Give positive orders and directions.

## 3. Obtaining water and placing streams

- a. Separate the fire from the people closest to it.
- b. Control interior stairways and corridors for evacuating occupants and advancing fire fighters.
- c. Protect crews searching for victims around and above the fire.
- d. Streams should be placed as soon as possible upon arrival to coordinate with the search.

## 4. Search

- a. Begin search immediately if there are indications of trapped or overcome victims
- b. Search operations demand coordination and cooperation.
- c. Fire spread must be blocked when searching around or above the fire.
- d. Ventilation, laddering, and forcible entry may be required before search can begin.
- e. All personnel on the scene must be aware that a search is in progress.

## 5. Ventilation – Building should be ventilated as soon as possible.

## II. RESCUE OPERATIONS

## A. Rescue means removing victims and potential victims from danger.

## 1. Extent of rescue problem directly affected by

- a. Number of people in the fire building
- b. Paths by which fire and smoke can reach them
- c. Routes available to crews for reaching people and removing them from building

## 2. Factors depend on construction, size, and interior layout of the building.

## 3. Crews must be prepared for the most complex structures.

## 4. Rescue problem can tax the capacity of first arriving units. Call for additional companies without delay.

## B. Residential Occupancies

## 1. Might require rescue operations at any time of day.



2. Rescue situations are more acute at night.
    - a. Occupants asleep and off guard
    - b. More people in residence
  3. Single family dwellings
    - a. Search area around fire (fire floor first).
    - b. Search area above the fire.
    - c. Search may begin without an attack line.
    - d. Attempt to isolate the fire.
    - e. Ventilate rooms beyond the fire room (as necessary).
  4. Apartment houses
    - a. Note location of fire and smoke during size up.
    - b. Vent the building to relieve carbon monoxide and other combustible gases.
    - c. Search fire floor, floor above fire, and top floor.
    - d. Search other floors as soon as possible.
    - e. Search and rescue must be coordinated with fire attack.
  5. Hotels and motels
    - a. Problems similar to large apartment houses.
    - b. Problem depends on size, age, general construction, and number of occupants in the building.
    - c. Number of people in transient occupancy varies with time of day and day of week.
    - d. Must be thoroughly ventilated.
    - e. Fire floor, floor above fire, top floor, and other floors must be searched.
    - f. Give prompt attention to rooms behind the fire room.
- C. Industrial Occupancies
1. Present greatest rescue problem during daytime working hours.
  2. Companies should be aware of working hours.
  3. Physical ability/self-rescue ability of employees is a rescue consideration.
  4. Rescue can be hampered by burning chemicals or other hazardous materials.
  5. Large areas require special rescue procedures to maintain control and contact.
  6. Offices present major rescue problems with daytime fires.
- D. Hospitals, Schools, and Institutions
1. Handled essentially the same as multiple family housing.
  2. Compounded by a larger number of people, their age, and physical condition.
  3. Night rescues more difficult.
    - a. Sleeping patients
    - b. Some patients sedated
    - c. Some patients immobilized
  4. Fire in vacant areas may not be detected promptly (delayed response/prolonged fire development).
  5. Know special areas for bedfast, non-ambulatory, and continuous care.
  6. Evacuation depends on construction and size as well as location and severity of fire.
    - a. Move patients within building.
    - b. Corridors divided by smoke and fire control doors.
    - c. Lower patients to the floor whenever smoke is encountered.
  7. Crews should be aware of school usage - daytime and/or nighttime.
  8. Expect overly excited or panicking children and adults.
- E. Retail Stores
- Time of day, day of week, and season all affect rescue operations.
1. Exits
    - a. The larger the store, the greater distance between most customers and exits.
    - b. Super stores are laid out for restricted traffic flow.
    - c. Narrow aisles lead to narrower checkout aisles.
    - d. Turnstiles at entrances.
    - e. Shopping carts may increase evacuation difficulty.
    - f. Door openings are usually limited.



- g. Fire and smoke will cause panic with pushing and shoving.
- h. Primary objective is to get people out.
- 2. Additional openings
  - a. Crews must calm occupants and establish a traffic pattern.
  - b. If necessary, additional openings should be forced.
  - c. Create separate openings for occupants and fire fighters, where possible.
- 3. Search
  - a. Aisles, offices, and storerooms must be searched.
  - b. Upper floors must be searched.
  - c. Search may be simplified by lack of partitions.
  - d. Know the construction and layout.

### III. SEARCH AND RESCUE PRACTICAL

It is recommended that searchers wear full protective clothing, including SCBA, and carry appropriate tools and equipment to conduct the search and carry out the rescue.

- A. Working as a team, conduct a search of a small room, and drag or carry any victims found to a safe location.
  - 1. Maintain direction.
  - 2. Communication between team members.
  - 3. Mark area.
  - 4. Use the same doorway.
  - 5. Use proper drag or carry.
  - 6. Critique evolution.
- B. Working as a team, conduct a search of a large room, and drag or carry any victims found to a safe location.
  - 1. Maintain direction.
  - 2. Communication between team members.

- 3. Mark area.
- 4. Use the same doorway.
- 5. Use proper drag or carry.
- 6. Critique evolution.

### IV. RESCUE USING GROND LADDERS

- A. Important to select proper length ladder, especially when a straight ladder is used.
- B. As the ladder is raised for rescue, it must be kept out of reach of the people to be removed.
- C. Raise ladder in vertical position away from the building, pivot, extend if needed, and lower tip to victims.
- D. When placed at a window for rescue, the tip should be at or just over the level of the sill.
- E. When placed at the front railing of a balcony, fire escape, or at a wall beside a railing or fire escape, extend two to four rungs above the railing for a good handhold.
- F. Ladders raised to the roof should be two to four rungs above the roof wall.

### REVIEW

Search and rescue

Chronology of rescue operations

Rescue considerations

Search and rescue practical

Rescue using ground ladders

### REFERENCES

*Truck Company Fireground Operations*, Second Edition, Chapter 3

*Essentials of Fire Fighting*, Fourth Edition, IFSTA, Chapter 7

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